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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,209	03/18/2004	Andreas Kuhstoss	GKN-0150	5824

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EXAMINER

LOPEZ, CARLOS N

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,209

Applicant(s)

KUHSTOSS ET AL.

Examiner

Carlos Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1 IDS</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 does not provide a clear distinction between the body of the claim and the preamble. It is unclear if the layer having the claimed properties is part of the body of the claim hence carrying patentable weight or merely the preamble of claim 7.

The phrase "the resulting green layer" lacks antecedent basis.

For examination purposes, the limitations defining the layer will be considered as the preamble of claim 7, wherein the body of the claim will be read to define a process having claimed mixture comprised of a pore material, sinterable powder in a carrier fluid being applied to a supporting.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann WO 99/54524, for which Neumann et al (US 6,652,804) will be referenced, in

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view of Third et al (US 5,592,686). Neumann discloses a method of making a porous sintered metal film. The method comprises making a mixture comprised of sinterable powder in a carrier fluid comprised of a binder and a solvent (See claim 1 of Neumann). The mixture is then applied to a carrier substrate, which as noted in Col. 4, lines 60ff is comprised of a tubular porous substrate, to form a green layer that is subsequently sintered to form a porous metal film (See claim 1 of Neumann).

Neumann is silent disclosing adding a pore former material to the mixture. However, Third teaches of making porous metal structure by providing a mixture comprised of sinterable powder in a carrier fluid comprised of a binder and then laying the mixture onto a substrate (see abstract). Third notes that a pore forming material can be added to the mixture and points out that by adding a pore former control of the pore distribution can be achieved without the need to use labor intensive prior art controls of changing metal particle sizes to achieve the porosity (see Third Col. 3, lines 20ff).

Hence, at the time the invention was made, it would have been obvious to a person of ordinary in the art to have added a pore former material as taught by Third in the mixture of Neumann in order to provide control of the pore distribution can be achieved without the need to use labor intensive prior art methods.

As for claim 8, Third in Col. 5, lines 24ff notes that the size of the pore forming agent and amount is select to provide the desired porosity/pore volume, hence the proportion of the pore forming material corresponds to the predetermined/ desired pore volume.

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As for claim 9, see above.

As for claim 10, the size of the pores forming material powder naturally vary in size, meaning the size of the powder inherent varies, as such a graded layer design would have been expected to be produced by the combined teachings of Neumann and Third.

As for claim 11, claim 2 of Neumann notes of applying many partial layers on the substrate.

As for claim 12, claim 5 of Neumann notes of drying each layer prior to depositing an additional layer.

As for claim 13, claims 7 and 8 of Neumann note sintering of the layer prior to the application of the next layer.

As for claim 14, claim 10 of Neumann notes the claimed coating methods.

As for claim 15-16, Col. 4, lines 45ff notes of providing a porous substrate and rotating the substrate as claimed as the mixture is being applied thereon.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference N in PTO-892 has been cited to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to be the letters 'AZ' with a stylized flourish.

CL